Carded

PRESS BULLETIN 520 *August, 1938*

UNIVERSITY OF FLORIDA
AGRICULTURAL EXPERIMENT STATION
WILMON NEWELL, Director
GAINESVILLE

IMPERIAL MYCOLOGICAL INSTITUTE
7 FEB. 1939

LEAF SPOT OF PITTOSPORUM

By ERDMAN WEST
Mycologist, Florida Experiment Station

Pittosporum tobira is well known to many Florida home owners and is one of our most valuable ornamental shrubs. It has been useful especially in the northern half of the State where its dense green bushes are equally as attractive in winter as they are in summer. As its claim to beauty is based upon the dark green color of its leaves, anything that spoils this even coloration detracts from its value. Leaf spot, caused by a fungus (probably a species of *Cercospora),* is often a very serious offender in this respect.

This disease appears as a small yellowish-green spot, usually not over ⅛ inch across when first observed. The yellow color gradually becomes more prominent and the spot increases in size until it is ¼ inch or more in diameter. By this time the shape of the spot appears more or less angular, because its margin is delimited by the larger veins of the leaf. No further increase in size is likely to occur but the color gradually becomes brownish-yellow. Mature leaves anywhere on the bush are susceptible to the disease. Very young leaves have not been found affected but the trouble appears soon after they attain full size and the normal "firm" texture.

Affected leaves may be restricted to one side or portion of a plant, or they may be evenly scattered over the whole bush. Often leaves bear only one of the angular yellow spots but in other instances four or more may occur. In very severe cases only a few green flecks may remain between the numerous diseased areas. Such badly affected leaves soon fall from the bush. Continual defoliation from this cause weakens the plant.

The cause of the Pittosporum leaf spot disease is a parasitic fungus. Its growth is not evident on the upper side of the leaf

and not very conspicuous on the lower side. On the under side of spots that have reached the yellow stage a gray downy or woolly fuzz may be seen. These fine threads are the fruiting structures of the fungus. Tiny filament-like spores are produced in abundance on these fuzzy areas and are easily blown about, spreading the disease to new leaves or to new plants.

During the dormant winter period the fungus hibernates on spots on the old leaves. When growth of the host starts in spring, new leaves are infected from affected portions of old ones. Whether the fungus produces spores of any sort on the fallen leaves is not yet known. In the southern part of the State the fungus is active probably every month in the year.

Control of the disease is not difficult, though eradication is out of the question since the fungus is so widely distributed in the State.

Any good copper-containing fungicide will control the disease, but the use of a stainless spray is desirable from the esthetic standpoint. Bordeaux mixture, 3-3-50 strength, has always proven effective under all conditions, but it stains the foliage rather badly. Basic copper sulfate at the rate of 1½ pounds to 50 gallons of water, plus a sticker, may be substituted, resulting in less discoloration. Flordo spray is effective also (see Press Bulletin 504). Ammoniacal copper carbonate will leave no visible residue but is a little less effective in the control of the trouble. The spray may be applied any time but is most effective when applied as the newest flush of growth is maturing but before it has become infected. When applied at this time the fungicide acts as a prophylactic on the young growth and prevents the spots on the older leaves from maturing spores. Since most of the fungus is on the under sides of the leaves care should be taken to cover these thoroughly. Usually one application is enough to check the disease, but better results will be obtained if a second application is made two or three weeks later. Be sure to spray the whole bush thoroughly.